What is claimed is:

1.   A graphical user display for providing real-time process information to a user for a process that is operable under control of one or more process variables, wherein one or more of the process variables has high and low process limit values associated therewith, the graphical user display comprising one or more graphical devices, wherein each graphical device corresponds to a process variable, wherein at least one graphical device for a corresponding process variable includes:

a gauge axis;

at least one pair of high and low limit elements displayed on the gauge axis representative of high and low process limit values for the corresponding process variable; and

a graphical shape displayed along the gauge axis representative of a value of the corresponding process variable relative to the process limit values.

2.   The graphical user display of claim 1, wherein the at least one graphical device includes a first pair of high and low limit elements representative of engineering hard high and low limit values for the corresponding process variable and a second pair of high and low limit elements representative of operator set high and low limit values for the corresponding process variable.

3.   The graphical user display of claim 2, wherein the at least one graphical device includes a first pair of parallel lines extending orthogonal to the gauge axis representative of the engineering hard high and low limit values for the corresponding process variable and a second pair of pair of parallel lines extending orthogonal to the gauge axis representative of the operator set high and low limit values for the corresponding process variable.

4.   The graphical user display of claim 3, wherein a single pair of parallel lines extending orthogonal to the gauge axis represent both the engineering hard high and

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low limit values and the operator set high and low limit values for the corresponding process variable when the operator set high and low limit values are set at the engineering hard high and low limit values.

5.   The graphical user display of claim 3, wherein the second pair of parallel lines extending orthogonal to the gauge axis representative of operator set high and low limit values are displayed at a shorter length than and between the first pair of parallel lines extending orthogonal to the gauge axis representative of engineering hard high and low limit values along the gauge axis.

6.   The graphical user display of claim 1, wherein the at least one pair of high and low limit elements is a pair of parallel lines extending orthogonal to the gauge axis.

7.   The graphical user display of claim 6, wherein the graphical shape is positioned adjacent one of the pair of high and low limit elements when the value for the corresponding process variable is within a certain range of one of the high and low process limit values.

8.   The graphical user display of claim 6, wherein the graphical shape is positioned outside of the parallel lines when the value for the corresponding process variable is outside the high and low process limit values by a predetermined percentage.

9.   The graphical user display of claim 1, wherein the graphical device further includes a graphical symbol representative of an optimization characteristic for the corresponding process variable.

10.   The graphical user display of claim 9, wherein the graphical symbol is representative of a corresponding process variable to be maximized.

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11.   The graphical user display of claim 9, wherein the graphical symbol is representative of a corresponding process variable to be minimized.

12.   The graphical user display of claim 9, wherein the graphical symbol is representative of a corresponding process variable which is to be held at a resting value.

13.   The graphical user display of claim 1, wherein the at least one graphical device further includes a graphical symbol representative of the corresponding process variable being constrained to set point.

14.   The graphical user display of claim 1, wherein the at least one graphical device further includes a graphical symbol representative of the corresponding process variable being wound up.

15.   The graphical user display of claim 1, wherein the graphical shape is a circle positioned along the gauge axis.

16.   The graphical user display of claim 1, wherein the graphical shape has a color of a set of colors that reflects the state of the current value for the corresponding process variables.

17.   The graphical user display of claim 16, wherein a color for the graphical shape represents one of a current value of the corresponding process variable being within the high and low process limit values, the current value of the corresponding process variable being within a percentage of one of the high and low process limit values, and the current value of the corresponding process variable being outside of the high and low process limit values.

18.   The graphical user display of claim 1, wherein the process is a continuous multivariable process being performed at a process plant, wherein the continuous

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multivariable process is operable under control of at least manipulated variables and controllable variables of the one or more process variables.

19.   The graphical user display of claim 18, wherein the graphical user display includes a matrix display having the manipulated variables displayed along a first axis thereof and the controlled variables displayed along a second axis thereof, wherein each of the manipulated and controlled variables includes a graphical device displayed in proximity thereto.

20.   The graphical user display of claim 1, wherein each graphical device displayed is selectable for navigation to more detailed information for process variable corresponding to the selected graphical device, wherein the detail information is displayed on the same screen therewith.

21.   A computer implemented method for providing a graphical user display for providing real-time process information to a user for a process that is operable under control of one or more process variables, wherein one or more of the process variables has high and low process limit values associated therewith, the method comprising the step of displaying at least one graphical device for a corresponding process variable, wherein displaying the at least one graphical device includes:

displaying a gauge axis;

displaying at least one pair of high and low limit elements on the gauge axis representative of high and low process limit values for the corresponding process variable; and

displaying a graphical shape along the gauge axis representative of a value of the corresponding process variable relative to the high and low process limit values.

22.   The method of claim 21, wherein displaying at least one pair of high and low limit elements on the gauge axis includes:

displaying a first pair of high and low limit elements representative of engineering hard high and low process limit values for the corresponding process variable; and

displaying a second pair of high and low limit elements representative of operator set high and low limit values for the corresponding process variable.

23. The method of claim 22, wherein displaying the first pair of high and low limit elements representative of engineering hard high and low limit values includes displaying a first pair of parallel lines extending orthogonal to the gauge axis, and further wherein displaying the second pair of high and low limit elements representative of operator set high and low limit values includes displaying a second pair of parallel lines extending orthogonal to the gauge axis.

24. The method of claim 22, wherein displaying at least one pair of high and low limit elements includes displaying a single pair of parallel lines extending orthogonal to the gauge axis to represent both the engineering hard high and low limit values and the operator set high and low limit values for the corresponding process variable when the operator set high and low limit values are set at the engineering hard high and low limit values.

25. The method of claim 23, wherein the second pair of parallel lines extending orthogonal to the gauge axis representative of operator set high and low limit values are displayed at a shorter length than and between the first pair of parallel lines extending orthogonal to the gauge axis representative of engineering hard high and low limit values.

26. The method of claim 21, wherein displaying at least one pair of high and low limit elements on the gauge axis includes displaying a pair of parallel lines extending orthogonal to the gauge axis.

27. The method of claim 26, wherein displaying the graphical shape along the gauge axis includes displaying the graphical shape at position adjacent one of the pair of high and low limit elements when the value for the corresponding process variable is within a certain range of one of the high and low process limit values.

28. The method of claim 26, wherein displaying the graphical shape along the gauge axis includes displaying the graphical shape at position outside of the parallel lines when the value for the corresponding process variable is outside the high and low process limit values by at least a predetermined percentage.

29. The method of claim 21, wherein the method further includes displaying a graphical symbol representative of an optimization characteristic for the corresponding process variable along the gauge axis.

30. The method of claim 29, wherein the graphical symbol is representative of a corresponding process variable to be maximized.

31. The method of claim 29, wherein the graphical symbol is representative of a corresponding process variable to be minimized.

32. The method of claim 29, wherein the graphical symbol is representative of a corresponding process variable which is to be held at a resting value.

33. The method of claim 21, wherein displaying the graphical shape along the gauge axis further includes displaying a graphical symbol representative of the corresponding process variable being constrained to set point.

34. The method of claim 21, wherein displaying the graphical shape along the gauge axis further includes displaying a graphical symbol representative of the corresponding process variable being wound up.

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35. The method of claim 21, wherein displaying the graphical shape along the gauge axis includes displaying a circle along the gauge axis.

36. The method of claim 21, wherein the method further includes:

determining a state of a current value for the corresponding process variable; and

displaying the graphical shape in a color of a set of colors that reflects the determined state for the corresponding variable.

37. The method of claim 36, wherein determining the state of the current value includes determining whether the current value of the corresponding process variable is within the high and low process limit values, whether the current value of the corresponding process variable is within a certain percentage of one of the high and low process limit values, and whether the current value of the corresponding process variable is outside of the high and low process limit values.

38. The method of claim 21, wherein the process is a continuous multivariable process being performed at a process plant, wherein the continuous multivariable is operable under control of at least manipulated variables and controlled variables of the one or more process variables, and further wherein the method includes:

displaying a matrix display having the manipulated variables displayed along a first axis thereof and the controlled variables displayed along a second axis thereof; and

displaying a graphical device in proximity to each of the manipulated variables and controlled variables.

39. The method of claim 21, wherein the method further includes:

receiving user input to select a displayed graphical device; and

displaying detailed information for the process variable corresponding to the selected graphical device, wherein the detailed information is displayed on the same screen with the graphical device.

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